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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/602,532	06/24/2003	Philip James Jenkinson	4398-239	1755
23117	7590	09/12/2005	EXAMINER	
NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203			NASRI, JAVAID H	
			ART UNIT	PAPER NUMBER
			2839	

DATE MAILED: 09/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.	Applicant(s)	
	10/602,532	JENKINSON ET AL.	
	Examiner	Art Unit	
	Javaid Nasri	2839	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 and 19-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 and 19-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-9, 13-15, 17, 19, 21, 23, 27 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Riches et al (4,550,967).

Riches et al discloses, **for claim 1**, a plug including a lug (20); a socket to interface with the plug; and a retaining clip (40, 50, 60, 70), including a lug engaging mechanism (36, 38, 40) structured to allow disengagement of the plug from the socket at a predetermined release force applied to the plug (see abstract, lines 7-9), the retaining clip being movably positioned (the spring rings moves when the lug 20 is pushed into the slot 36) with respect to the socket for movement between a non-plug – retaining position, and a plug – retaining position wherein a sloping surface of the lug engaging mechanism engages the lug, the sloping surface having an angle (when a tangent is drawn on the surface) that is at least partially determinative of the predetermined release force, **for claims 2, 5 and 8**, the plug is configured to disconnect from the socket at a predetermined release force and wherein the plug retaining assembly is reconfigurable so that after the plug has disconnected due to being subjected to at least the release force, the plug may be reconnected to the socket and remain connected to the socket until again subjected to the release force, **for claims 3, 6 and 9**, in use, the plug is disconnectable

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from the socket by application of a withdrawal force that is substantially less than the release force required to disconnect the plug from the socket when the retaining clip is used, **for claim 4**, providing the plug retaining assembly with a plug, a socket to interface with the plug, and a retaining clip, wherein the plug includes a lug (20) and the retaining clip includes a lug engaging mechanism (36, 38, 40) having a wedge angle adapted to allow disengagement of the plug from the socket at a predetermined release force; selecting the wedge angle in accordance with the predetermined release force (see col.3, lines 48-50, 64-68, col. 4, lines 12-15 and 19-26), engaging the plug with the socket; and moving the lug engaging mechanism with respect to the engaged plug and socket to position the wedge angle with respect to the plug, **for claim 7**, providing the retaining assembly with a plug, a socket to interface with the plug, and a retaining clip, wherein the plug includes a lug and the retaining clip includes a lug engaging mechanism having a wedge angle adapted to allow disengagement of the plug from the socket at a predetermined release force; selecting a resilience of the retaining clip in accordance with the predetermined release force, engaging the plug with the socket, and moving the lug engaging mechanism with respect to the engaged plug and socket to position the wedge angle width respect to the lug (see col.3, lines 48-50, 64-68, col. 4, lines 12-15 and 19-26), **for claim 13**, the plug includes at least one pin receiving slot that is adapted to receive respective pins provided on the socket, **for claim 14**, pair of lugs (20), **for claim 15**, the retaining clip includes-a-pair of tabs (38) positioned at respective ends of a pair of arm (opposite sides of slot 36), the tabs adapted to engage with respective lugs of the plug to maintain the retaining clip in the plug retaining position, **for claim 17**, the friction between the lugs and the tabs is at least partially determinative of the predetermined release force, **for claim 19**, the retaining clip includes a

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groove adapted to receive an upper portion of the plug when the retaining clip is in the plug retaining position (see figures 1 and 2), **for claim 21**, a second plug, a second socket, and a second retaining clip, wherein the retaining clip and second retaining clip are rotatable in opposite directions (since there is no relation to first plug, first socket and first clip, the claim reads on a similar second pair of plug and socket), **for claim 23**, selecting the resilience of the retaining clip includes selecting a resilience of arms of the retaining clip, **for claims 27 and 28**, the moving comprises pivotally moving the retaining clip (the movement of part 52 reads on pivoting, see note below) from a non-plug-retaining position to a plug-retaining position to position the wedge angle with respect to the lug.

Note: USPTO interprets claims, giving claims their “broadest reasonable interpretation.”

(See, e.g., *In re Morris*, 127 F.3d 1048, 1054-55 (Fed. Cir. 1997)).

3. Claims 1, 10-12, 14-16, 25 and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Leong et al (5,713,752).

Leong et al discloses, **for claim 1**, a plug including a lug; a socket to interface with the plug; and a retaining clip, including a lug engaging mechanism structured to allow disengagement of the plug from the socket at a predetermined release force applied to the plug, the retaining clip being movably positioned with respect to the socket for movement between a non-plug – retaining position, and a plug – retaining position wherein a sloping surface of the lug engaging mechanism engages the lug, the sloping surface having an angle that is at least partially determinative of the predetermined release force (see abstract), **for claim 10**, the retaining clip is pivotally mounted to the socket, **for claim 11**, the retaining clip includes a pair of pins that insertable within respective bores provided in lugs of the socket to enable pivotal movement of

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the retaining clip about the pins (see figures 1-3), **for claim 12**, at least one of the bores includes a notch and at least one of the pins includes a protrusion, the protrusion adapted to engage within the notch when the retaining clip reaches a plug retaining position see figures 1-3, **for claim 14**, pair of lugs, **for claim 15**, the retaining clip includes-a-pair of tabs positioned at respective ends of a pair of arm, the tabs adapted to engage with respective lugs of the plug to maintain the retaining clip in a plug retaining position, **for claim 16**, the resilience of the arms is at least partially determinative of the predetermined release force, **for claim 25**, the retaining clip includes a pair of arms and a bridge piece that interconnects the pair of arms, the bridge piece providing the sloping surface (see figure 4), **for claim 26**, a resilience of the pair of arms is at least partially determinative of the predetermined release force,

Note: USPTO interprets claims, giving claims their “broadest reasonable interpretation.”

(See, e.g., *In re Morris*, 127 F.3d 1048, 1054-55 (Fed. Cir. 1997)).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 20, 22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Riches et al.

Riches et al. discloses all the limitations of claims 1 and 4, as shown above,

However, Riches et al. does not disclose:

- a) The predetermined release force is between about 100-300 N. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the predetermined release force to be between about 100-300 N, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Response to Arguments

6. Applicant's arguments filed 7/11/2005 have been fully considered but they are not persuasive.

Regarding applicant's comments:

- a) Riches do not disclose a retaining clip that is movably positioned with respect to the socket for movement between a non-plug-retaining position and a plug-retaining position. It should be noted that the spring rings (40, 50, 60, 70) does move when the lug 20 is pushed in slot 36 (see figure 6).
- b) The arcuate-shaped spring ring of Riches does not provide a sloping surface having an angle. It should be noted that it does provide a sloping surface having an angle if you draw a tangent on the surface.
- c) Riches do not disclose providing a retaining clip having a wedge angle as recited in claims 4 and 7. It should be noted that it does have a wedge angle when a tangent is drawn on the surface.

- d) Riches do not disclose selecting the wedge angle in accordance with the predetermined release force and selecting a resilience of the retaining clip in accordance with the predetermined release force. It should be noted that in the claims the predetermined release forces are not defined, therefore, any force could read on the claim.
- e) The hook 41 of Leong does not include a sloping surface that has an angle that is at least partially determinative of the predetermined release force. It should be noted that in the claim the predetermined release force is not defined, therefore, any force could read on the claim.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

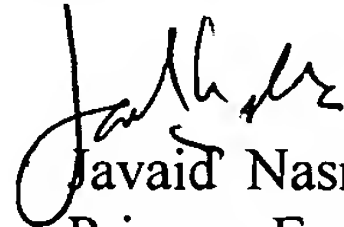
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Contact

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Javaid Nasri whose telephone number is 571 272 2095. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tulsidas C. Patel can be reached on 571 272 2800 ext 39. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Javaid Nasri
Primary Examiner
Art Unit 2839

JN
Jhn
September 7, 2005